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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,399	12/03/2003	Hidekazu Shimomura	03500.017747.	3410

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EXAMINER

PHAN, JAMES

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/725,399	Applicant(s) HIDEKAZU SHIMOMURA	
	Examiner James Phan	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-10 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 6/21/04 has been considered by the examiner.

### ***Additional Prior Art Cited***

Each of Takakubo discloses a scanning optical system which is relevant to the claimed invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 6-10 rejected under 35 U.S.C. 102(e) as being anticipated by Takakubo '658.

Takakubo '658 discloses an optical scanning apparatus (Figs. 1-4) for use in an image forming apparatus such as a laser beam printer, a digital copying machine, a

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laser fax machine and a laser plotter (column 1, paragraphs 0001-0002). The optical scanning apparatus comprises:

light source means (11); deflecting means (13); and a scanning optical system (20) having a first scanning lens (21) nearest to the deflecting means and a second scanning lens (22) nearest to the surface to be scanned (S). The first scanning lens (21) having a meniscus shape and a positive refractive power, and satisfies the condition  $d1/fm < 0.06$  (see column 5, paragraph 0078 for  $fm = 200.0$  mm, and TABLE 1 for  $d1$  (equivalent to the distance D between surfaces #4 and #5) = 10.00 mm); and the second scanning lens (22) having an aspherical surface (122a) free of an inflection point or arcuate shape, and satisfies the condition  $2.5 < |R3/fm|$  (see column 5, paragraph 0077, and TABLE 1 for R3 (equivalent to radius of curvature of front surface 122a) = -577.54).

In re claims 7-8 the features such as developing device, a transferring device, a fixing device, and a printer controller, recited in the claims are inherently disclosed because they are necessary components for an image forming apparatus such as a laser beam printer.

In re claim 9 Takakubo '658 also discloses a color laser printer having a plurality of image bearing members (photoconductive drums; see column 4, paragraph 0069).

In re claim 10/9 a printer controller is inherently disclosed because it is a necessary component for the color laser printer.

Claims 1 and 6-8 rejected under 35 U.S.C. 102(e) as being anticipated by Takakubo '705.

Takakubo '705 discloses an optical scanning apparatus (Figs. 1A-1C, 3-5) for use in an image forming apparatus such as a laser beam printer or the like (column 1, lines 1-7). The optical scanning apparatus comprises:

light source means (11); deflecting means (20); and a scanning optical system having a first scanning lens (31) nearest to the deflecting means and a second scanning lens (51) nearest to the surface to be scanned (61). The first scanning lens (31) having a meniscus shape and a positive refractive power, and satisfies the condition  $d1/fm < 0.06$  (see column 14, TABLE 1 where fm is disclosed to be 200.0 mm and d1 (equivalent to the distance d between surfaces #4 and #5) = 5.00 mm); and the second scanning lens (51) having an aspherical surface (surface #8, column 14, lines 38) free of an inflection point or arcuate shape, and satisfies the condition  $|2.5 < R3/fm|$  (TABLE 1, R3 (equivalent to radius of curvature of front surface #8) = -592.00).

i.i.

In re claim 6 the open language in the claim does not preclude <sup>the</sup> existence of other lenses, i.e. lens 32, in the scanning optical system.

In re claims 7-8 the features such as developing device, a transferring device, a fixing device, and a printer controller, recited in the claims are inherently disclosed because they are necessary components for an image forming apparatus such as a laser beam printer.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takakubo '705 in view of Takakubo '658.

In re claim 9 Takakubo '705 discloses an optical scanning apparatus having all claimed features, discussed in the rejection of claims 1 and 6-8 above; Takakubo '705 further discloses the use of the optical scanning apparatus in an image forming apparatus such as a laser beam printer (column 1, lines 1-7). Takakubo '705 does not specifically disclose the use of an optical scanning apparatus in a color image forming apparatus for forming images of different colors. However, the use of an optical scanning apparatus in a color image forming apparatus for forming images of different colors is known in the art (see Takakubo '658, column 1, paragraph 0002, and column 4, paragraph 0069). Thus, it would have been obvious to one skilled in the art to apply the teaching of Takakubo '658 in Takakubo '705 for forming a color image forming apparatus such as a color laser printer in order to improve the look of printed images.

In re claim 10/9 a printer controller is inherently disclosed in Takakubo '658 because it is a necessary component for the disclosed color laser printer.

***Allowable Subject Matter***

Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the cited references teach or fairly suggest an optical scanning apparatus (1) including the first scanning lens having convex shape in the sub-scanning direction in combination the remaining features recited in claim 2; (2) having satisfied the condition  $< 2.5$  in combination the remaining features recited in claim 3; (3) including the second scanning lens having a particular shape in combination the remaining features recited in claim 4; and (4) having 10% or less imaging magnification errors of the scanning lenses in the sub-scanning direction in combination with the remaining features recited in claim 5.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (571) 272-2317. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP  
3/6/05



**James Phan**  
**Primary Examiner**